

Name: \_\_\_\_\_ TP: \_\_\_\_\_

Failure to show all work and write in complete sentences will result in LaSalle.

1a) The deer population at the beginning of hunting season was about 500. It decreased 18% over the course of the season. The new population is:

- A. 590 ① % to decimal : \_\_\_\_\_  
 B. 410 ② MULTIPLY : \_\_\_\_\_  
 C. 320 ③ Done? Add? Subtract? \_\_\_\_\_  
 D. 90

b) EXPLAIN: Did you just multiply? Or, did you add or subtract to the total?

2) A sweater is 20% off. If the sweater is usually \$45, how much is the savings?

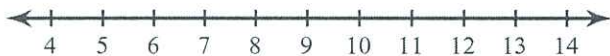
- A. \$2.00  
 B. \$9.00  
 C. \$20.00  
 D. \$25.00

b) EXPLAIN: Did you just multiply? Or, did you add or subtract to the total?

COMPLETE SENTENCES

3) Solve and graph:

$-9(7 + x) < -171$  SHOW ALL WORK in the "MATH" column



Math	Reason
$-9(7+x) < -171$ $-63 - 9x < -171$	Given Distributive Prop.

Explain whether or not you would flip the inequality symbol:

4) Solve and graph:

$8n + 8 + n \leq -19$  ALWAYS combine like terms FIRST.



Math	Reason

Explain whether or not you would flip the inequality symbol:

COMPLETE SENTENCES

Give me a Z! G'me an ESTY! PUT IT TOGETHER! ZESTY!

5) **Error Analysis.** In the box to the right, describe and correct the mistake made in solving the problem below:

$$4n + 1 = 5n - 8 + 5$$

+8 +8

$$4n + 1 = 5n + 13$$

-1 -1

$$4n = 5n + 12$$

-5n -5n

$$-n = 12$$

$$n = -12$$

6) A pair of shoes that originally costs \$75.00 is on sale at 40% off. If the sales tax on the shoes is 7% of the purchase price, how much would it cost to buy the pair of shoes at the sale price?

- F. \$33.15  
G. \$40.00  
H. \$42.90  
J. \$45.00  
K. \$48.15

ON SALE:

WITH TAX:

\*Use SALE price as total - NOT \$75.00

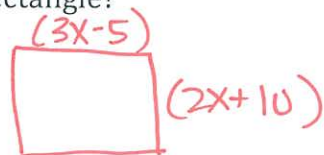
b) EXPLAIN: Did you just multiply? Or, did you add or subtract to the total?

(You should've used two operations after you multiplied)

7) If  $-2(n - 5) = -5n - 14$  then  $4n = ?$

Did you forget to read the directions?

8) A rectangle has a length of  $(3x - 5)$  ft. and a width of  $(2x + 10)$  ft. What is the area of the rectangle?



Add, sub, mult or div?

9) Solve:  $\frac{3}{4}x = 12$

HINT:  $\frac{2}{3} \cdot \frac{5}{2} = 1$

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1)

One of the following is the slope of the line graphed in the standard (x,y) coordinate plane below. Which one is it?

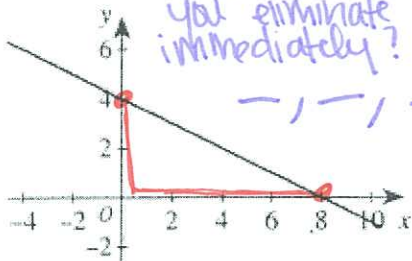
F. -8

G.  $-\frac{1}{2}$

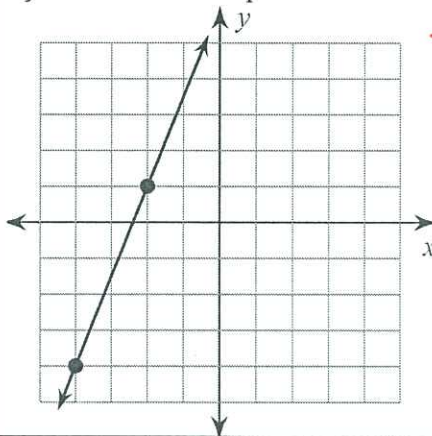
H.  $\frac{1}{2}$

J. 2

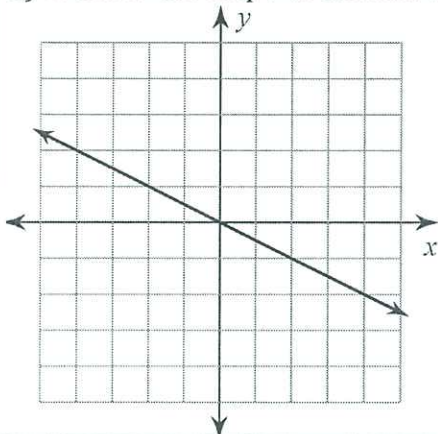
K. 4



2) What is the slope of the line below:



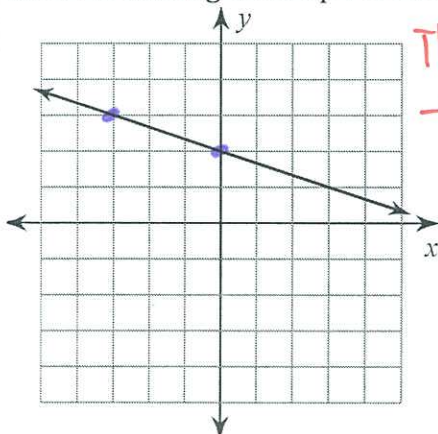
3) What is the slope of the line below:



4a) Sketch a line with a slope of zero: (ZERO rise... HORIZON)

b) Sketch a line with an undefined slope: (ALL rise)

5) **Error Analysis.** Describe and correct the error made in finding the slope of the line below.



6) **Error Analysis.** Describe and correct the error made in finding the slope from the two ordered pairs below.

$(-1, 18), (8, -17)$

$$\frac{-17-18}{8-1} = \frac{-35}{7} = \boxed{-5=m}$$

**Give me a Z! G'me an ESTY! PUT IT TOGETHER! ZESTY!**



7) What is the value of  $2x^2 - 3x - 4$  when  $x = -2$  ?

- A. -18
- B. -6
- C. -2
- D. 6
- E. 10

8) Which of the following is equivalent to

$4(3x - 1) < 7x + 2(x + 4)$  ? \*Which two options can you eliminate immediately? — \$ —

- F.  $x < \frac{4}{3}$
- G.  $x = \frac{4}{3}$
- H.  $x < \frac{8}{3}$
- J.  $x < 4$
- K.  $x = 4$

9) For all  $y$ :  $26y - (-10y) - 3y(-y + 3) = ?$  \* $y \cdot y = y^2$

- A.  $10y$
- B.  $-3y^2 + 25y$
- C.  $3y^2 + 7y$
- D.  $3y^2 + 25y$
- E.  $3y^2 + 27y$

10) If  $x = -3$  is one solution of the equation  $x^2 - kx - 24 = 0$ , what is the value of  $k$  ?

- A. 5
- B. 8
- C. -5
- D. -21
- E. -27

\*HOT spots are circled! Watch negatives!

- ① Substitute  $x = -3$
- ② Solve for  $k$

11) Mrs. Dorgan's gross monthly income is \$1,800. If 15% is withheld for income taxes, how much is Mrs. Dorgan's take-home pay?

①

②

③

\*USE STEPS FROM HW78 #1

b) EXPLAIN: Did you just multiply? Or, did you add or subtract to the total?

12) A shirt that originally cost \$35 is on sale at 20% off. If the sales tax on shirts is 5% of the purchase price, how much would it cost to buy the shirt at its sale price?

ON SALE:

SALES TAX  
(use sale total from) NOT \$35  
(5%  $\neq$  .5!)

- A. \$ 7.35
- B. \$20.00
- C. \$26.60
- D. \$29.40
- E. \$29.75

b) EXPLAIN: Did you just multiply? Or, did you add or subtract to the total? (You should use two steps!)

COMPLETE SENTENCES

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1) Disregarding sales tax, how much will you save when you buy an \$11 compact disc that is on sale for 25% off?

- A) \$0.28
- B) \$0.44
- C) \$2.75
- D) \$3.00
- E) \$8.25

① % to decimal

② Multiply

③ +/- ?

\* ONLY asks for how much you'll save. NOT the new price.

b) EXPLAIN: Did you just multiply? Or, did you add or subtract to the total?

2) The shipping costs for Acme Furniture Company increased by 60% because the company moved. If it cost Acme \$80 to ship some furniture before the company moved, how much would it cost to ship the same furniture after the move?

- a. \$48.00
- b. \$84.80
- c. \$108.00
- d. \$128.00
- e. \$140.00

①

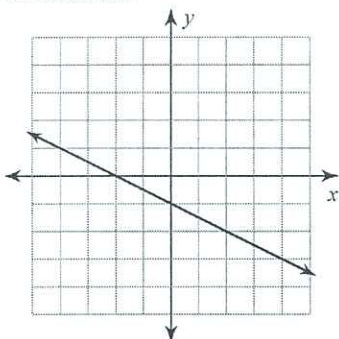
②

③

b) EXPLAIN: Did you just multiply? Or, did you add or subtract to the total?

COMPLETE SENTENCES

3) Find the slope of the graph using TWO different methods:



Method 1: RISE  
RUN

Method 2:  
 $\frac{y_2 - y_1}{x_2 - x_1}$

4)

$h(x)$

What is the value of  $h(1.5)$  when  $h(x) = -4x^2 + 20x + 32$ ?

- F. 26
- G. 50
- H. 53
- J. 56
- K. 71

THIS means  
 $x = 1.5$

5)

For what value of  $x$  is  $3(x + 5) = 2(x - 6)$  true?

- F. 27
- G. 11
- H. -11
- J. -21
- K. -27

6) ERROR ANALYSIS. Describe and correct the error in calculating the slope of the line passing through the points (5, 3) and (2, 6).

$$m = \frac{6-3}{5-2} = \frac{3}{3} = 1$$

Give me a Z! G'me an ESTY! PUT IT TOGETHER! ZESTY!

7) **WRITE MATH!** Create a set of steps to teach someone how to solve the equation below (make sure to include the final solution!): *STEP 1:*

$$8 + \sqrt{12r} = 14$$

8) Solve and graph:

$$1 - 4a - 8a \leq -23$$

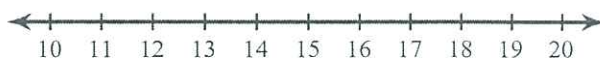
*ALWAYS combine like terms first.*



Explain whether or not you would flip the inequality symbol:

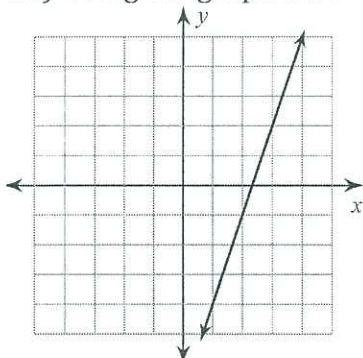
9) Solve and graph:

$$9 + \frac{r}{12} < 10$$



Explain whether or not you would flip the inequality symbol:

10) Using the graph below,

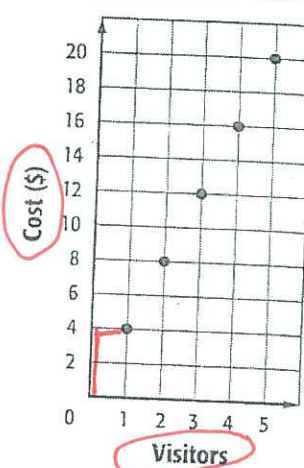


a) Identify three ordered pairs on the graph:

b) Determine the slope of the line.

11) The graph represents how much the Wright Brothers National Monument charges visitors. How much does the park charge each visitor? Write your answer in a complete sentence.

Wright Brothers National Monument



*RISE RUN \*Pay attention to x- & y-axis labels.*



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FORM A

HW81: Slope from Equations  
Geometry  
Due Date: Monday, March 24<sup>th</sup> 2014

Failure to show all work and write in complete sentences will result in LaSalle.

1) A pair of jeans costs \$18. They are on sale for 15% off. Sales tax is 9.5%. What is the final price?

- A. \$12.50
- B. \$16.75
- C. \$18.99
- D. \$22.67

SALE:

SALES TAX:  
(use new sale total, not \$18)

2) A small town has a population of 1800 people. One year the population increases by 5%. The next year, it decreases by 10%, how many people does the town end up with?

- A. 1701
- B. 1710
- C. 1753
- D. 1795

INCREASES

DECREASES

\*5% = .5

(use NEW total)

b) EXPLAIN: Did you just multiply? Or, did you add or subtract to the total?

b) EXPLAIN: Did you just multiply? Or, did you add or subtract to the total?

COMPLETE SENTENCES

3) Mars has much less gravity than Earth, so objects on Mars weigh about 38% of what they would on Earth. If Jason weighs 175 pounds on Earth, about how many pounds would he weigh on Mars?

- F. 66.5
- G. 89
- H. 108.5
- J. 241
- K. 460.5

4) If  $\sqrt{4x} - 2 = 6$ , then  $x = ?$

- F. 4
- G. 8
- H. 16
- J. 24
- K. 32

5) Error Analysis. In the box to the right, describe and correct the mistake made in solving the problem below:

$$-b - 4b \geq 20$$



$$\begin{array}{r} -5b \geq 20 \\ \underline{-5} \quad \underline{-5} \\ b \geq -4 \end{array}$$

Give me a Z! G'me an ESTY! PUT IT TOGETHER! ZESTY!

6)

When  $3x - 12y = 6$  and  $y = -2$ , what is the value of  $x$ ?

F. -18

G. -6

H.  $\frac{4}{3}$

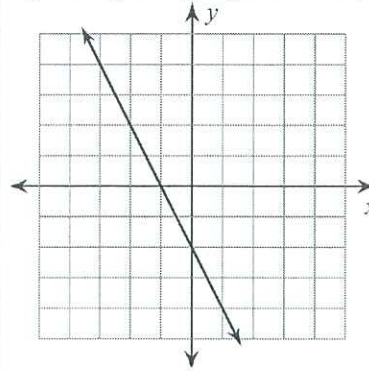
J. 4

K. 10

You know what  $y$  equals. Substitute. Then, solve for  $x$ .

7) Using the graph below,

+ or -?

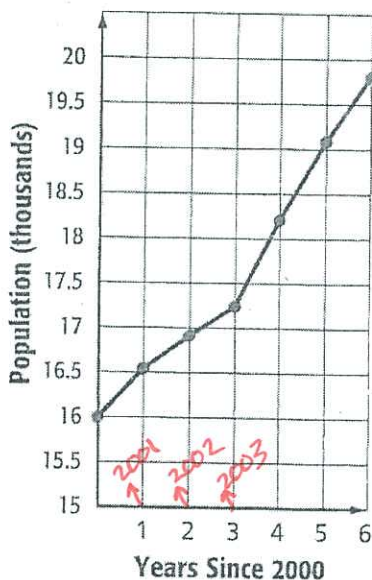


a) Identify three ordered pairs on the graph:

b) Determine the slope of the line.

8) Use the graph below to answer the questions to the right:

**POPULATION GROWTH** The graph shows the population growth in Leesburg, Florida, since 2000. (Lesson 3-3)



a) For which time period is the rate of change the greatest? Justify your response.

What years do you see the greatest increase in population?

b) What was the approximate population in 2005?

c) Approximately how much did the population grow from 2000 to 2001?

COMPLETE SENTENCES

9) Determine the slope of the equations below:

a)  $y = -2x + 8$

$y = mx + b$   
SLOPE

$m =$

b)  $3x = 9y - 6$

$3x + 6 = 9y$  → FINISH!

$m =$

10) Determine the slope of the equations below:

a)  $2x + 3y = 8$

$-2x + 3y = -2x + 8$

\*Always put "x" in front  
FINISH! & keep the sign!

$m =$

b)  $4x - 2y = 10$

$m =$

Give me a Z! G'me an ESTY! PUT IT TOGETHER! ZESTY!